GRAZED FORESTLAND

Successful resource management on grazed forestland is the correct application of a combination of practices that will meet the needs of the total forestland ecosystem--the soil, water, air, plant, and animal resources and the objectives of the landuser.

Grazed forestland includes areas that are naturally forested or planted to forest and are being managed for a combination of wood and forage production. All grazed forestland requires forest management to enhance forage production and the management of livestock grazing to insure desired forestland production.

In planning a grazed forestland Resource Management system (RMS), vegetative management (forest management and grazing management) is the foundation on which the RMS is built. Forest Stand Improvement and Prescribed Grazing are essential to vegetation management. A grazing management plan that balances the forage and feed to the animal numbers, describes the animal movement through the pastures, and meets the needs of the soil, water, air, plants, and animals is essential to the formulation of a RMS on grazed forestland.

All other practices planned on grazed forestland are either to:
1. facilitate the application of the Forest Stand Improvement or Prescribed Grazing and are identified as OPTIONAL practices, or
2. cause or accelerate changes in the forest ecosystem and are identified as NEEDED practices. These NEEDED practices are planned when necessary to treat specific resource problems to meet the criteria for managing the soil, water, air, plant, and animal resources.

A RMS on Grazed Forestland include a combination of practices that are:
1. ESSENTIAL - Vegetative management practices, Forest Stand Improvement, Prescribed Grazing, and livestock water are essential to the successful management of grazed forestland and are always planned in the RMS.
2. NEEDED - These practices are planned when necessary to cause or accelerate changes in the grazed forestland ecosystem that cannot be achieved through application of vegetation management (ESSENTIAL) and facilitating (DESIRABLE) practices alone, and are required to meet the RMS Quality Criteria.
3. OPTIONAL - These practices facilitate or enhance the vegetative management of grazed forestland.

A RMS for grazed forestland is developed by selecting a combination of the ESSENTIAL, plus the OPTIONAL and/or NEEDED practices whose combined effects will meet the criteria established for each resource (soil, water, air, plants, and animals) and the objectives of the landuser. When multiple land use is an objective, the needs of each use and the effects of each practice to must be considered in the selection and application design of each practice to ensure compatibility. The following is a list of practices applicable to grazed forestland:

- **ESSENTIAL**

  Forest Stand Improvement (666)
  Prescribed Grazing (528)

GRAZED FORESTLAND - Continued:

- **NEEDED**

  Bedding (310)
  Critical Area Planting (342)
  Diversion (362)
  Filter Strip (393)
  Firebreak (394)
  Forest Site Preparation (490)
  Grade Stabilization Structure (410)
  Prescribed Burning (338)
  Streambank and Shoreline Protection (580)
  Structure for Water Control (587)
  Tree/Shrub Establishment (612)
  Upland Wildlife Habitat Management (645)
  Wetland Wildlife Habitat Management (644)

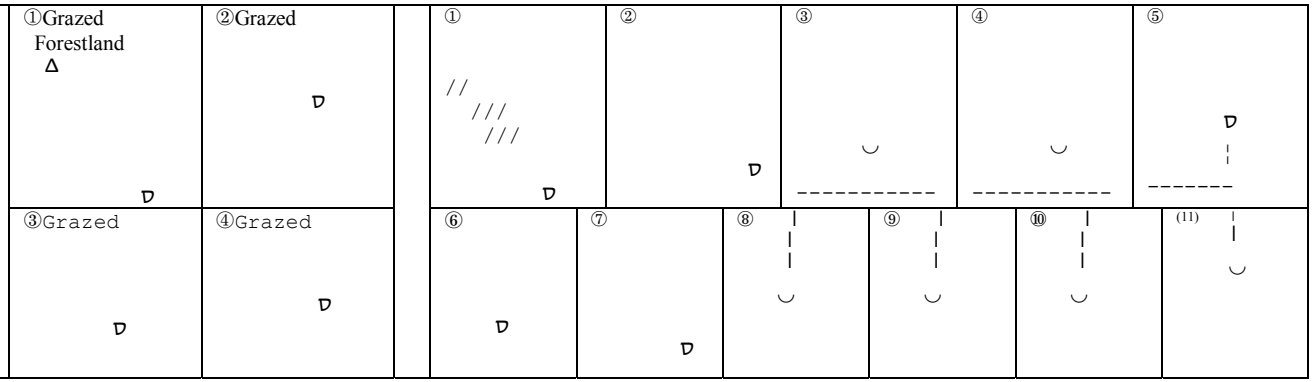
- **OPTIONAL PRACTICES**

  Access Road (560)
  Dike (357)
  Fence (382)
  Pipeline (516)
  Pond[1] (378)
  Spring Development[1] (574)
  Watering Facility[1] (614)
  Watering Well[1] (642)

[1] One or more practices will be essential when no water exists in newly created pastures.

GRAZED FOREST LAND RESOURCE MANAGEMENT SYSTEM

Existing Conditions: Tract is 640 acres of 20-year-old, even-aged loblolly pine that averages 8-inches in diameter. The site index is 90. The stand is overstocked with trees. No existing erosion problems. The area is currently grazed by cattle. The plant vigor is low because of overgrazing and a closed canopy. Forage value rating is low for cattle and deer. Calf crop is 60 percent, and the average weaning weight is 325 pounds. Internal parasites are a problem. Landowner wants to manage for wood production and livestock production as well as to create a good habitat for deer and wild turkey.



Option I Option II

Option I: (1) Beginning in 1990, thin one pasture each year and establish a 5-year thinning cycle. Clear-cut one pasture 1 at 45 years of ape, pasture 2 at 50 years, pasture 3 at 55 years, and pasture 4 at 60 years. (2) Plant loblolly pine after each clear cut. (3 and 4) Surround and divide area into four equal parts and install 30-ft wide roads seeded to cool season grasses and legumes that will serve as green fire breaks and facilitate forest management. (5) Construct ponds as shown on map. (6) Prescribe bum on a 4-year rotation cycle or as needed. (7) Stock at a rate to achieve proper use of the key grazing and browsing species.

Express the effects of the selected practices as N/A, if not applicable; f – facilitating; 0 + no effect; + = positive effect; and - = negative effect.

Resource Problems / Conservation Management System options	Soil	Water	Air	Plant					Animal						
	Erosion	Quality	Quality	Condition			Management		Habitat				Management		
	Roadbank erosion	Water management for nonirrigated land	Smoke for safety and health	Plant suitability	Productivity	Plant health & vigor	Est. growth harvest	Pest management	Foot – Cattle	Food – Deer, wild turkey	Cover – deer, wild turkey	Water – Cattle	Population /resource balance: Cattle	Population /resource balance: Deer Wild Turkey	Animal health Cattle
Quality Criteria met	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Forest Stand Improvement	0	+	N/A	+	+	+	+	+	+	+	+	0	+	+	+
Tree/Shrub Establishment	0	+	N/A	+	+	+	+	0	0	0	+	0	0	0	N/A
Access Road	+	F	N/A	F	F	F	F	F	F	F	+	N/A	F	F	F
Firebreak	+	F	F	F	F	F	F	F	+	+	F	N/A	F	F	F
Ponds	N/A	F	N/A	F	F	F	F	F	F	F	F	+	F	F	F
Prescribed Burning	N/A	+	+	+	+	+	+	+	+	+	+	N/A	F	F	F
Prescribed Grazing	+	+	N/A	+	+	+	+	+	+	+	+	N/A	+	+	+

Grazed Forestland Resource Management System – *Continued*.

Option II: Every fifth year beginning in 1990, thin all pastures and clear-cut one pasture. After planting, first thinning will be at 15 year of age. 2. Plant loblolly pine after each clear cut. 3 and 4. Divide area into 11 equal parts and install 30-ft wide roads seeded to cool season grasses and legumes that will serve as green fire breaks and facilitate forest management and fencing. 5. Establish two-wire electric fence along one side of the access road. 6. Construct four ponds as shown on map. 7. Install livestock pipeline as shown. 8. Install through to supply water to each pasture. 9. Prescribe burn on a 4-year rotation cycle or as needed. 10. Stock at rate that balances forage supply and numbers or animals. 11. Rotate one herd through the grazeable units using a 30 to 60 day cycle.

Express the effects of the selected practices as N/A, if not applicable; f = facilitating; 0 = no effect; + = positive effect; and - = negative effect.

Resource Problems / Conservation Management System options	Soil	Water	Air	Plant					Animal						
	Erosion	Quality	Quality	Condition			Management		Habitat				Management		
	Roadbank erosion	Water management for nonirrigated land	Smoke for safety and health	Plant suitability	Productivity	Plant health & vigor	Est. growth harvest	Pest management	Food– Cattle	Food – Deer, wild turkey	Cover – deer, wild turkey	Water – Cattle	Population /resource balance: Cattle	Population /resource balance: Deer Wild Turkey	Animal health Cattle
Quality Criteria met	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Forest Stand Improvement	0	+	N/A	+	+	+	+	+	+	+	+	+	0	+	+
Tree/Shrub Establishment	0	+	N/A	+	+	+	+	0	0	0	+	0	0	0	N/A
Access Road	+	F	N/A	F	F	F	F	F	F	F	+	N/A	F	F	F
Firebreak	+	F	F	F	F	F	F	F	+	+	F	N/A	F	F	F
Fence	+	N/A	F	F	F	F	F	F	F	F	F	N/A	F	F	F
Ponds	N/A	F	N/A	F	F	F	F	F	F	F	F	+	F	F	F
Pipeline	N/A	F	N/A	F	F	F	F	F	F	F	F	F	F	F	F
Watering Facility	N/A	F	N/A	F	F	F	F	F	F	F	F	+	F	F	+
Prescribed Burning	N/A	+	+	+	+	+	+	+	+	+	+	N/A	+	+	+
Prescribed Grazing	+	+	N/A	+	+	+	+	+	+	+	+	N/A	+	+	+